

527406

N91-11688

11 JULY 1988 DENVER WINDSHEAR ENCOUNTERS

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ABSTRACT

On July 11, 1988, between 2207 and 2213 UTC (16:07-16:13 MDT), four successive United flights had inadvertent encounters with microburst windshear conditions while on final approach to Denver Stapleton Airport (DEN), each resulting in a missed approach, subsequent delay, and uneventful arrival. A fifth flight executed a missed approach without encountering the phenomena. There was no damage to aircraft and no passenger injuries were incurred. The term "inadvertent" is used within United Airlines' windshear training materials and the FAA Windshear Training Aid to connote an encounter with windshear after vigilance and cautionary practices fail to identify and afford complete avoidance of the hazardous area. No crew culpability is implied. A comprehensive investigation for scientific purposes in the study of windshear phenomenon is being conducted separately under the guidance of the FAA with involvement and cooperation from United, NTSB, National Center for Atmospheric Research (NCAR), ALPA, APA, Boeing, Douglas, and NASA.

PLOT - ALL ACRFT IN 1 MIN SEGMENTS

2207:00.00 - 2208:00.00 +

UAL395:XYZ
UAL862:XYZ

NORTH RANGE IN N.M.

-2.00

-1.00

0.00

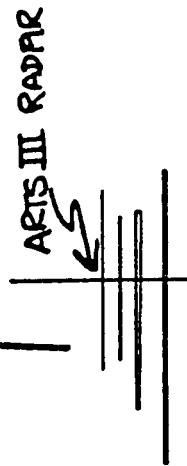
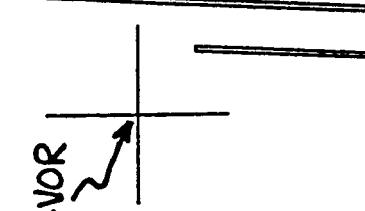
1.00

2.00

3.00

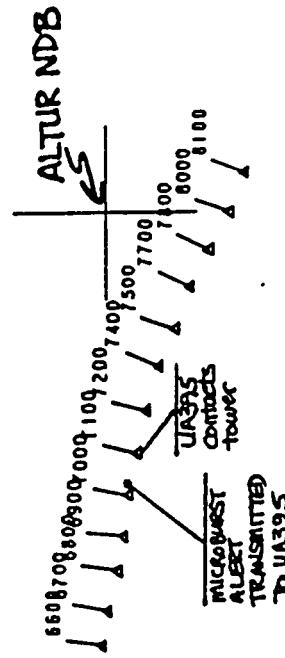
4.00

DEN-VOR



UA862 anomalies
missed approach

+ t
1700 8100

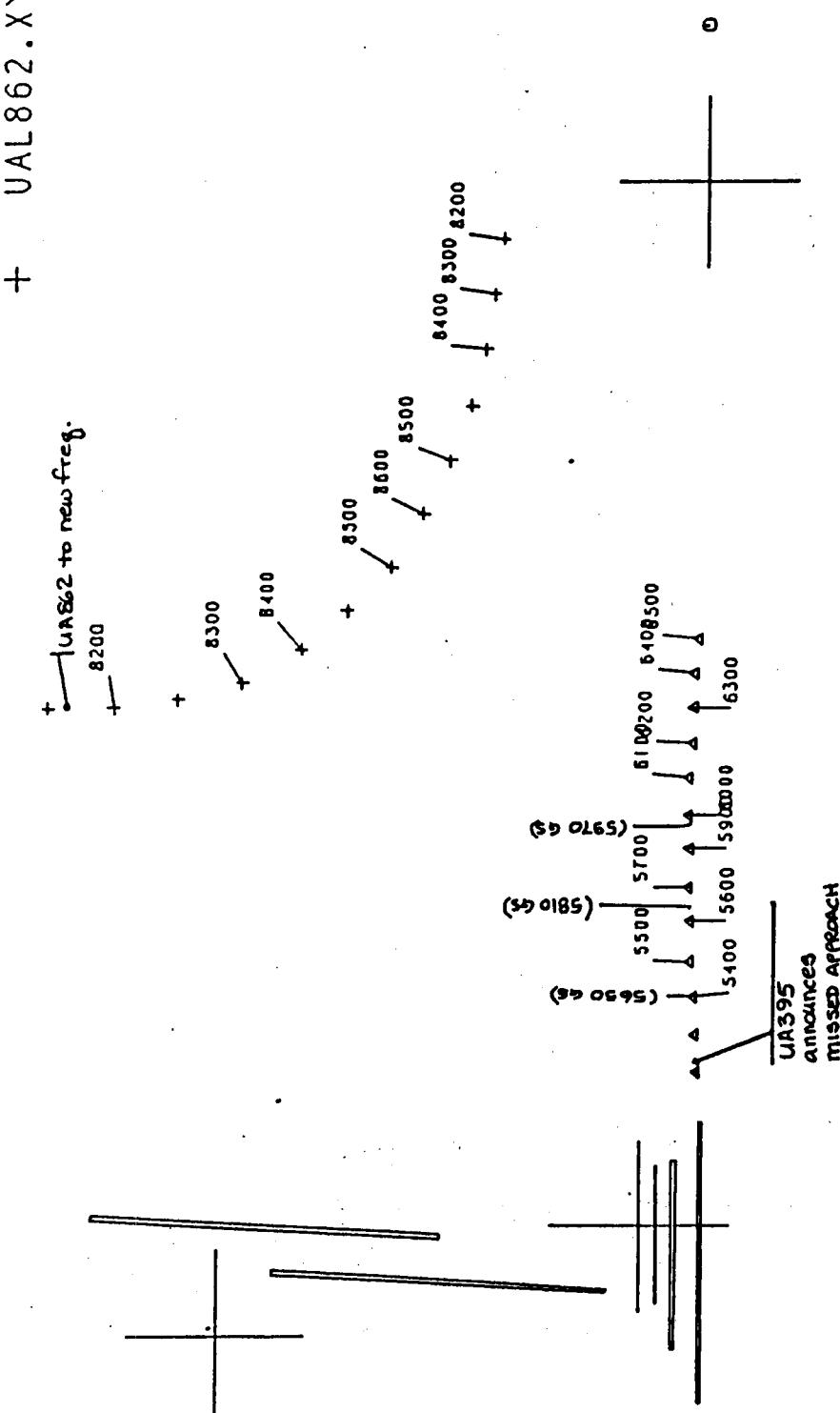


-2.00 -1.00 -0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00
EAST RANGE IN N.M.

PL0T - ALL ACRFT IN 1 MIN SEGMENTS

2208:00.00-2209:00.00

UAL236:XYZ
UAL395:XYZ
UAL862:XYZ



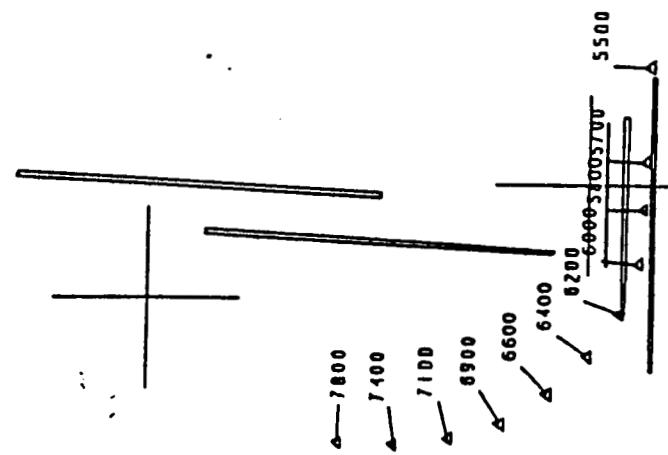
NORTH RANGE IN N.M. -2.00 -1.00 -0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00

PLOT - ALL ACRFT IN 1 MIN SEGMENTS

2209:00.00-2210:00.00

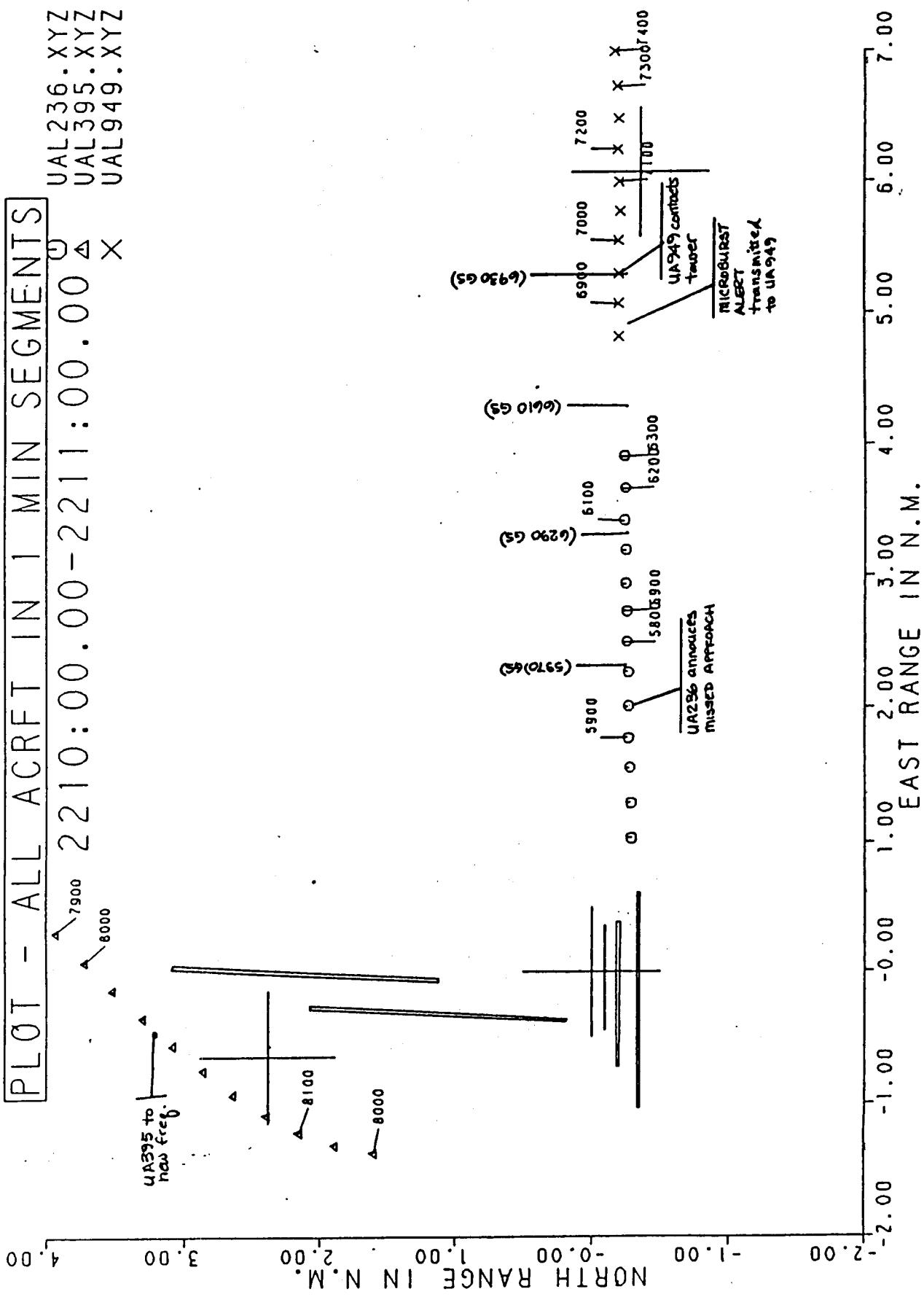
UAL236.XYZ
UAL395.XYZ
UAL862.XYZ

NORTH RANGE IN N.M. -2.00 -1.00 -0.00 1.00 2.00 3.00 4.00



PLOT - ALL ACRFT IN 1 MIN SEGMENTS

UAL 236 : XYZ
UAL 395 : XYZ
UAL 949 :



PLT - ALL ACRFT IN 1 MIN SEGMENTS

2211:00.00-2212:00.00

UAL236.XYZ
UAL949.XYZ
UAL305.XYZ

NORTH RANGE IN N.M.

-2.00 -1.00 -0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00

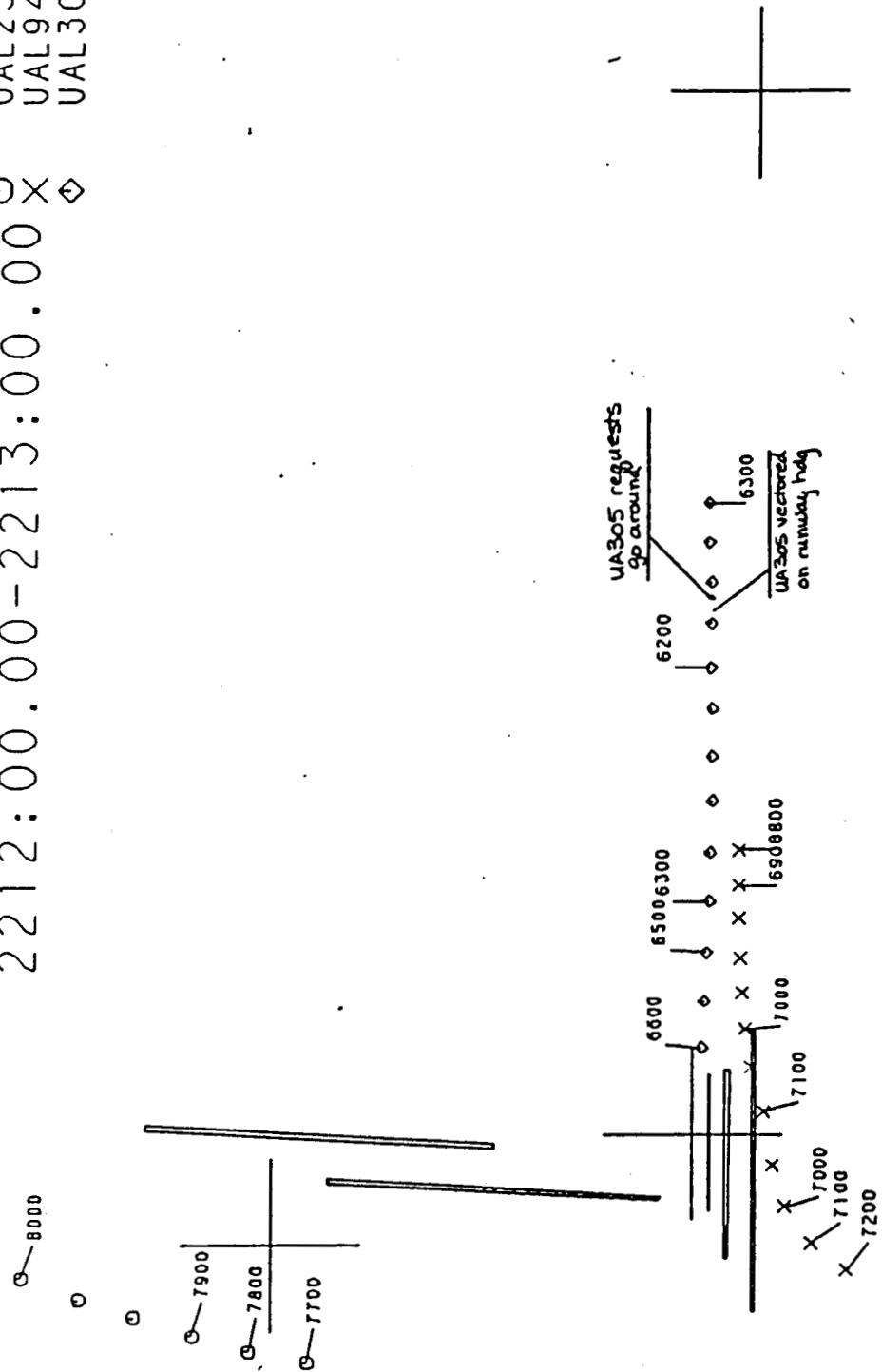
EAST RANGE IN N.M.

PL0T - ALL ACRFT IN 1 MIN SEGMENTS

2212:00.00 - 2213:00.00

UAL236.XYZ
UAL949.XYZ
UAL305.XYZ

NORTH RANGE IN N.M.



EAST RANGE IN N.M.

-2.00 -1.00 -0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00